CLAIMS

WE CLAIM:

1. A method of transmitting program data having a playback rate comprising:

(a) scheduling a first transmission of a program in response to a client request by a client, wherein the program has a playback rate;

(b) selecting a target transmission that is farther along in the program as a merge target for the transmission, so that the transmission could merge with the target transmission absent a change in the target transmission; and

(c) receiving at the client a composite of the first transmission and data of the target transmission, neither of which is time-distorted, wherein a data rate of the composite is a non-integer multiple of the playback rate

2. A method of transmitting a program data file on-demand, comprising:

(a) beginning a first transmission of the program data file in response to a first client request for the program data file at a first data file transmission rate;

(b) beginning a second transmission of the program data file in response to a second client request for the program data file;

(c) beginning a first patch data transmission in response to the second client request, wherein the patch data is transmitted at a patch data transmission rate slower than the transmission rate of the first transmission of the program data file; and

(d) discontinuing the second transmission and patch data transmission when the second client is capable of receiving the data file solely from the first transmission of the program data file.

3. The method as recited in claim 2, wherein the second transmission of the program data file is also transmitted at a second transmission rate, and wherein the patch data transmission rate is less than the second transmission rate.

4. The method as recited in claim 2, wherein the first data file transmission rate is equal to a playback rate.

5. The method as recited in claim 2, wherein the first patch data transmission transmits a first segment of data, further comprising discontinuing a portion of the first transmission of the program data file corresponding to the first segment of data.

6. The method as recited in claim 2, further comprising after step (c):

(e) beginning a third transmission of the program data file at a time of a third client request;

(f) beginning a second patch data transmission in response to the third client request; and

(g) discontinuing the third transmission and second patch data transmission when the third client is capable of operating from the first transmission of the program data file.

7. The method as recited in claim 6, wherein step (f) further comprises beginning the second patch data transmission after the first patch data transmission has been discontinued.

8. The method as recited in claim 7, wherein the second patch transmission transmits a second segment of data, further comprising discontinuing a portion of the first transmission of the program data corresponding to the second segment of data.

9. A method of receiving and playing a program data file on-demand subsequent to inception of a first transmission of the program data file, comprising:

(a) requesting a second transmission of the program data file;

(b) playing data from the second transmission of the program data file while recording a first patch data transmission;

(c) after step (b), playing the previous data from the first patch data transmission while recording data from the first transmission of the program data file; and

(d) after step (c), playing the previously recorded data from the first transmission of the program data file while recording real-time data from the first transmission of the program data file.

10. The method as recited in claim 9, further comprising:

(e) requesting a third transmission of the program data file;

(f) playing data from the third transmission of the program data file while recording data from the first patch data transmission;

(g) recording data from a second patch data transmission;

(h) playing the recorded data from step (g) while recording data from the first transmission of the program data file; and

(i) playing the recorded data from the first transmission of the program data file while recording real-time the data from the first transmission.

11. The method as recited in claim 10, wherein step (g) further comprises recording data from the second patch data transmission after termination of the second patch data transfer.

12. A method of receiving and playing a program data file on-demand subsequent to inception of a first transmission of the program data file, comprising:

(a) receiving and playing data from a second transmission of the program data file;

(b) playing a decreasing amounts of data from the second transmission of the program data file while at least one of recording and playing increasing amounts of data from the first transmission of the program data file; and

(c) after step (b), recording and playing only data from the first transmission of the program data file.

13. The method as recited in claim 12, wherein steps (b) and (c) further comprise allocating data from the first transmission of the program data file into a corresponding channels of memory, wherein each channel corresponds to a portion of a repeating iteration of data transmission.

14. The method as recited in claim 12, wherein step (b) further comprises allocating incrementally increasing channels to record the first transmission of the program data.

15. The method as recited in claim 14, further comprising playing data from the second transmission of the program data for corresponding to channels that have not yet stored data from the first transmission of program data.

16. The method as recited in claim 15, wherein step (c) further comprises playing the previously recorded data and replacing the previously recorded and played data with real-time data from the first transmission of program data.

17. A method of communication a program data file to multiple clients on-demand, the method comprising:

(a) beginning a first transmission of the program data file in response to a first client request for the program data file, wherein the program data file is broken up into a plurality of substreams;

(b) after step (a), beginning a second transmission of the program data file in response to a second client request for the program data file, wherein the second transmission includes a plurality of substreams corresponding to the plurality of substreams of the first transmission;

(c) receiving the first and second transmissions at the second client, wherein the second client receives increasing substreams of the first transmission and decreasing substreams of the second transmission; and

(d) discontinuing the second transmission when the second client is receiving exclusively the substreams of the first transmission.

18. A method of communicating a program data file on-demand, comprising:

(a) beginning a first transmission of the program data file in response to a first client request for the program data file, the first transmission having a first transmission rate;

(b) receiving a second client request for a second transmission of the program data file at a time subsequent to the first client request;

(c) in response to the second client request, beginning the second transmission of the program data file, wherein the second data transmission includes the first transmission rate in addition to an extra transmission having a second transmission rate;

(d) receiving the second transmission including playing data at the first transmission rate while storing the extra transmission; and

(e) discontinuing the second transmission when the second client is capable of receiving continuous data of the program data file solely from the first transmission of data.

19. The method as recited in claim 18, further comprising, after step (e), receiving data from the first transmission including playing stored data in addition to storing data from the first transmission.